

SHOWCASE PROJECT: SHUTE PARK LIBRARY

SOLUTION OVERVIEW

The City of Hillsboro, Oregon, owns and operates the Shute Park Library, which is one of 14 Washington County Cooperative Services member libraries that share a countywide collection of almost two million items. The building is situated to the north of the iconic Douglas Fir trees in Shute Park, the City of Hillsboro's oldest park, and is substantially shaded for much of the year. The first public library in Hillsboro was constructed on this site on donated land in 1914.

Eventually the library outgrew the existing building, and in 1968 Friends of the Library formed to help raise money for the construction of a new facility, which opened in 1975. The new library was designed by architect Will Martin, who also designed Pioneer Courthouse Square in Portland. The most striking feature of the award-winning triangular building is its northern wall, composed of floor to ceiling windows.

In 2010, the City completed assessments of 13 city-owned and maintained facilities including the Shute Park Library. The library, one of two existing City libraries today, was assessed for the needed repairs and predicted replacement costs for the building's systems. Projects of need for the Shute Park Library included replacement of the entire roof, updates to insulation, and replacement of the HVAC system. The assessment also concluded that the cost to maintain and operate the library building in its current form would cost 70 percent of its current total replacement value over the next decade.

SECTOR TYPE

Local Government

LOCATION

Hillsboro, Oregon

PROJECT SIZE

16,000 Square Feet

SOLUTIONS

A study of the facility concluded that the library's major systems (HVAC, electrical, and roof) had reached the end of their service life and needed to be replaced. Three options to update the facility were considered:

- Renovation of the existing building: \$3,760,000

- New construction at a different site: \$4,700,000
- New construction at Shute Park site: \$4,860,000

The City determined that renovating the existing Shute Park Library on the existing site was the best option, which would also preserve the unique architectural and historic nature of the building. Construction on the Shute Park Library remodel began in May 2013 and completed in March 2014.

As the Better Buildings Challenge showcase project, the following energy-conservation measures were implemented (cost in parentheses, [total: \$929,364]):

- Installation of an efficient HVAC system (\$171,364)
- Replacement of internal lighting and addition of motion sensors (\$140,000)
- Replacement of window system with insulated glass (\$315,000)
- Addition of exterior wall insulation (\$18,000)
- Replacement of roof with more effective and efficient roof (\$225,000)
- Incorporation of sub-meters and automated controls systems for utility-specific real time data and analysis (\$15,000)
- Upgrade of exterior lighting to LED (\$45,000)

OTHER BENEFITS

This project has resulted in a major upgrade to the existing building, though the look and aesthetic, as well as the historical integrity of the building, has been fundamentally preserved. Other realized benefits of the upgrade include better overall comfort, lighting, indoor air and operations and reduced maintenance needs and costs.

Annual Energy Use

(Source EUI)

Baseline(2012)

267 kBtu/sq. ft.

Actual(2015)

175 kBtu/sq. ft.

Energy Savings

31%

Annual Energy Cost

Baseline(2012)

\$32,000

Actual(2015)

\$27,000

Cost Savings

\$5,000



New facade and LED lighting



New duct work



New insulation



Daylighting



Facade glass



Before renovation